TB CARE I - Zimbabwe

Year 3

Annual Report

October 1, 2012 –September 30, 2013

October 30, 2013

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List of Abbreviations

ACF	Allocable Cost Factor
APA 3	Annual Plan of Activities for year 3
ART	Antiretroviral therapy
DOTS	Directly Observed Treatment Short Course Strategy
DRS	Drug Resistance Survey
DR TB	Drug Resistant TB
HSS	Health Systems strengthening
IC	Infection control
ITHC	Integrated TB-HIV care
Global Fund	The Global Fund To Fight AIDS, Tuberculosis and Malaria
KNCV	KNCV Tuberculosis Foundation
MDR	Multidrug Resistant TB
M&E	Monitoring and Evaluation
MOH&CW	Ministry of Health and Child Welfare
NTP	National Tuberculosis Control Program
OR	Operations Research
PMDT	Programmatic Management of Drug Resistant TB
PMU	Program Management Unit
R&R	Recording and reporting
The Union	The International Union Against TB and Lung Disease
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

Under the leadership of The Union, in collaboration with WHO and KVCV, TB CARE I in Zimbabwe supported TB control in all geographic areas of the country. For sustainability and capacity building, the National TB Control Program (NTP) led the implementation of all the activities. The total buy in from USAID was US$6.4 million for APA 3. Support covered the technical areas of universal and early access to diagnosis and treatment, laboratories, infection control, programmatic management of drug resistant TB (PMDT), TB-HIV, health systems strengthening (HSS) and M&E, surveillance and operations research. Below is a summary of the year 3 highlights:

TB case finding: The diagnosis of both sensitive and resistant TB was strengthened through training, support supervision and the introduction of the Gene Xpert MTB/Rif technology. This has resulted in further decline of the proportion of pulmonary TB cases with sputum smear not done from 12% in 2011 to 8% in 2012. The number of MDR TB cases diagnosed increased from 118 in 2011 to 149 in 2012. The Gene Xpert made it possible to diagnose drug resistant TB in a timely manner to prevent further spread in the community. The motorcycle-based sputum transport system helped ensure rapid turnaround times from an average of 21 days to 7 days in the rural districts and from 7 days to 1 day in the urban areas for TB diagnosis and reduced the transport barrier for the largely poor patients. The use of mobile phones, supplied by TB CARE I, to contact patients with sputum positive results was well appreciated by the health workers and patients as it facilitated early initiation of treatment.

Management of TB and HIV co-infected patients: in response to the high (78%) prevalence of HIV infection amongst TB patients, integrated TB-HIV care was decentralized further to 10 more clinics, bringing the total to 23. This contributed to the increase nationally of the proportion of HIV-positive TB patients started on ART from 42% in year 2 to 67 in year 3. This trend is expected to reduce mortality among TB-HIV co-infected patients.

Clinical care of MDR patients: the clinical management of MDR was decentralized from 2 regional centres to all the 62 districts, in the country making the treatment of MDR much more accessible than previously. This development has been made possible following the conduct of a second advanced clinical MDR course for medical officers stationed in the districts and extensive training and mentorship on PMDT.

Infection control: this is a necessity in the Zimbabwe situation of high prevalence of both TB (estimated at 600/100,00 0 population) and HIV (13.7% in the 15-49 year age group). Improved ventilation and patient flow, through minor renovations of selected old health premises, is expected lead to improvement in infection control. It is now safer for patients and staff using the premises.

Monitoring and Evaluation: data-driven interventions improved the efficiency of the support provided to the national TB program. Regular data analysis with provincial and district comparisons helped identify priority areas for targeted support.

Introduction

TB CARE I in Zimbabwe is coordinated by the International Union Against Tuberculosis and Lung Disease (The Union), with the World Health Organization (WHO) and KNCV as collaborating partners. The support in year 3 targeted the whole country that is all 8 rural and 3 urban provinces with an estimated population of 13 million people. The PEPFAR-funded component focused on 23 health facilities in 17 urban areas, with an estimated combined population of 1.1 million people. The supported activities were based on a priority list of challenges and gaps submitted by the NTP, and were spread across 7 of the 8 TB CARE I technical areas. The 8th technical area (Drug supply and management) was not supported through TB CARE I because it is funded through other other partners. The total buy-in was US$ 6,400,000, including US$ 500,000 PEPFAR funding, distributed as follows:

Technical Areas	Key expected Outcomes	Lead Partners	% Budget
1. Universal and Early Access	Increased quality of TB services delivered by all care providers	The Union	12%
2. Laboratories	Ensured optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans	The Union	14%
3. Infection Control	Scaled-up implementation of TB-IC strategies	The Union	4%
4. PMDT	Improved treatment success of MDR TB	The Union, WHO, KNCV	13%
5. TB-HIV	• Strengthened prevention of TB-HIV co-infection • Improved diagnosis of TB-HIV co-infection • Improved treatment of TB-HIV co-infection	The Union	11%
6. Health System Strengthening	TB control components (drug supply and management, laboratories, community care, HRD and M&E) form an integral part of national plans, strategies and service delivery	The Union, WHO	24%
7. M&E, OR and Surveillance	• Strengthened TB surveillance • Improved capacity of NTPs to analyze and use quality data for the management of the TB program	The Union, WHO	22%
		Total	**100%**

Implementation of all planned the activities was led by the NTP secretariat and other government health workers at the provincial/city, district and primary levels of health care, while the TB CARE I team provided technical and financial support.

Core Indicators

TB CARE I has seven core indicators that the program as a whole is working to improve across all the countries it works in. Table 1 summarizes the core indicator results across the life of the project for TB CARE I – Zimbabwe. Results for 2013 will be reported on next year.

Table 1: TB CARE I core indicator results for Zimbabwe

Indicators	2010 (Baseline)	2011 (Year 1)	2012 (Year 2)
C1. Number of cases notified (all forms)	47,685	41305	38725
C2. Number of cases notified (new confirmed)	11,686	12,596	12,163
C3. Case Detection Rate (all forms)	52	56	50
C4. Number (and percent) of TB cases among HCWs	No national data	No national data	No national data
C5. Treatment Success Rate of confirmed cases	77%	81%	82%
C6. Number of MDR cases diagnosed	40	118	149
C7. Number of MDR cases put on treatment	28	64	105

TB CARE I contributed to the above indicators through the following:

- Training on TB and TB-HIV program and case management with a strong emphasis on case finding
- Development of PMDT training materials, conduct of training and follow up support
- Training on clinical management of drug-resistant TB
- Purchase and maintenance of Gene Xpert instruments and provision of cartridges
- Funding for the sputum transport system
- Support for support supervision: a) province to district, and b) district to primary health care facilities
- Support for Recording and Reporting
- C4: Six-monthly screening of HCW for TB is conducted at the 23 PEPFAR-supported clinics, but there is no national screening yet.

Summary of Project Indicators and Results

Table 2: TB CARE I- Zimbabwe Year 3 indicators and results

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
Universal Access							
1.2	Increased quality of TB services delivered among all care providers (Supply)	Pulmonary TB patients without a recorded smear microscopy result among adult patients	Indicator Value: Proportion Numerator: Pulmonary TB patients without a recorded smear microscopy result among adult patients Denominator: Total number of new pulmonary TB cases registered Level: National Source: NTP	Numerator = 3869 Denominator = 31768 12%	7%	7% (1497/20242)	The results are national level for the first three quarters of the year (October 2012 to September 2013). Data for the last quarter were not yet available at the time of writing this report.
– **Laboratories**							
2.3	Ensured optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans	2.3.2 (TB CARE/PEPFAR) Number of rapid tests conducted using Gene Xpert MTB/RIF.	Indicator Value: Number of tests Level: TB CARE /TB CARE areas Source: NTP and TB CARE Means of Verification: Lab register Numerator: Annual number of Gene Xpert tests conducted	3175	21500	1329	This target was set for 10 machines that were expected to be in operation for 12 months. However only 3 machines were in use for ¾ of the year. - The data are from January to July; August data were not yet ready
Infection Control							
3.2	Scaled-up implementation of TB-IC strategies	3.2.2 (PEPFAR) Facilities implementing TB IC measures with PEPFAR support	Indicator Value: Percent Level: PEPFAR sites Source: PEPFAR project Numerator: The number of facilities where PEPFAR supported the implementation of TB IC measures.	100% (13/13 ITHC sites)	100% (23/23 ITHC sites)	100% (23/23 ITHC sites)	– All 23 Integrated TB-HIV Care

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
			Denominator: Total number of facilities where PEPFAR planned to support the implementation of TB IC				
Programmatic Management of Drug-Resistant TB (PMDT)							
4.1	Improved treatment success of MDR TB	4.1.2 (TB CARE) MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment.	The cohort is patients put on treatment in a calendar year. Indicator Value: Percent Level: National and TB CARE geographic areas Source: MDR treatment register Numerator: Number of MDR TB patients in a calendar year cohort who are still on treatment and had culture conversion latest at month 6 (having had 2 negative sputum cultures taken one month apart and remained culture negative since)	71% (15/21)	71%	(64%) 30/47 registered patients	These are national TB data for the 1st two quarters of 2012 (January to June 2012). The data for the other half of the year were not yet available. Complete data will be updated when available
TB-HIV							
5.1	Strengthened prevention of TB-HIV co-infection	5.1.1 : (PEPFAR) New HIV patients treated for latent TB infection during reporting period	Indicator Value: Percent Level: PEPFAR sites Source: National AIDS Program (NAP) Numerator: Total number of newly-diagnosed HIV-positive clients in whom active TB has been excluded who start (given at least one dose) treatment of latent TB infection during reporting period. Denominator: Number of patients with HIV screened for TB and eligible for IPT	0	30%	41% 5166/12523	The data were collected from the 10 pilot sites in the whole country. They are for October 2012 to September 2013. We have redefined the indicator, changed the denominator to from " Total number of newly-diagnosed HIV-positive clients during reporting period." to "**Number of**

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
							patients with HIV screened for TB and eligible for IPT". This was done to be in line with the national AIDS Program Indicator.
5.2	Improved diagnosis of TB-HIV co-infection	5.2.1 (PEPFAR) HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services who were screened for TB symptoms at least once during year.	Indicator Value: Percent Level: PEPFAR sites Source: PEPFAR project Numerator: Number of HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services who were screened for TB symptoms at least once during the year. Denominator: Total number of HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services	U	60%	100% (26340/ 26340)	These were collected from the 23 PEPFAR supported ITHC sites from October 2012 to September 2013
		5.2.2 (TB CARE) TB patients registered over a given time period with an HIV test results recorded in the TB register	Indicator Value: Percent Level: National and TB CARE geographic areas Source: NTP/TB CARE project Numerator: Total number of all TB patients registered over a given time period with an HIV test results recorded in the TB register Denominator: Total	86% (35361/41305)	90%	(93%) 17245/18524	These are national level data for the first two quarters of 2012 calendar year. Complete data will be updated as they become available .

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
			number of TB patients registered over the same time period.				
		5.2.3 (PEPFAR) TB patients registered over a given time period with an HIV test results recorded in the TB register	Indicator Value: Percent Level: PEPFAR geographic areas Source: PEPFAR project Numerator: Total number of all TB patients registered over a given time period with an HIV test results recorded in the TB register Denominator: Total number of TB patients registered over the same time period.		100%	91% (2812/3096)	These data were collected from the 23 PEPFAR supported ITHC sites from October 2012 to September 2013
		5.2.4 (TB CARE) TB patients registered over a given time period who are recorded as HIV-positive	Indicator Value: Percent Level: National and TB CARE geographic areas Source: NTP/TB CARE project Numerator: Total number of all TB patients registered over a given time period who are recorded as HIV-positive Denominator: Total number of TB patients registered over the same time period	71% (25,125/35,361)	No target for percent of TB patients who are HIV-positive.	73% (12,675/17,245)	Annual national data for the 1st two quarters of 2012 calendar year
		5.2.5 (PEPFAR) TB patients registered	Level: National and TB CARE geographic areas Source: PEPFAR		70% - 80%	74% (2069/2812)	Same indicator as 5.2.4, but differing in level of care

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
		over a given time period who are recorded as HIV-positive	project Numerator: Total number of all TB patients registered over a given time period who are recorded as HIV-positive Denominator: Total number of TB patients registered over the same time period				and data source. The data here were collected from the 23 PEPFAR supported ITHC sites from October 2012 to September 2013
5.3	Improved treatment of TB-HIV co-infection	5.3.1 (TB CARE) HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART)	Indicator Value: Percent Level: National and TB CARE geographic areas Source: NTP/NAP/TB CARE project Numerator: All HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART) Denominator: All HIV-positive TB patients registered over the same given time period.	(45%) 14223/31849	60%	67% (8498/12675))	This is annual national data for the 1st two quarters of the 2012 calendar year
		5.3.2 (PEPFAR) HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART)	Indicator Value: Percent Level: PEPFAR sites Source: PEPFAR project Numerator: All HIV-positive TB patients, registered over a given time period, who receive ART (are		60%	67% (1390/2069)	Same indicator as 5.3.1, but differing in level of care and data source. The data here were collected from the 23 PEPFAR supported ITHC sites from

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
			started on ART) Denominator: All HIV-positive TB patients registered over the same given time period.				October 2012 to September 2013
		5.3.3 (TB CARE) HIV-positive TB patients, registered over a given time period, who receive (given at least one dose) CPT during their TB treatment	Value: Percent Level: National and TB CARE geographic areas Source: NTP/TB CARE project Numerator: Number of HIV-positive TB patients, registered over a given time period, who receive (given at least one dose) CPT during their TB treatment Denominator: Total number of HIV-positive TB patients registered over the same time period.	88% (27,902/31,849)	95%	95% (11,980/12,675)	These are annual national data for the 1st two quarters of the 2012 calendar year.
		5.3.4 (PEPFAR) HIV-positive TB patients, registered over a given time period, who receive (given at least one dose) CPT during their TB treatment By sex and age	Value: Percent Level: PEPFAR sites Source: NTP/NAP/PEPFAR project Numerator: Number of HIV-positive TB patients, registered over a given time period, who receive (given at least one dose) CPT during their TB treatment Denominator: Total number of HIV-positive TB patients registered over the	64%	95%	89% (1833/2069)	These data were collected from the 23 PEPFAR supported ITHC sites from October 2012 to September 2013

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
			same time period.				
Health System Strengthening							
6.2	TB control components (drug supply and management, laboratories, community care, HRD and M&E) form an integral part of national plans, strategies and service delivery	6.2.5 (TBCARE) Description: TB CARE supported supervisory visits conducted	Indicator Value: Percent Level: TB CARE geographic areas Source: TB CARE project Numerator: Number of TB CARE supported supervisory visits conducted from district level to health facilities Denominator: Number of TB CARE supported supervisory visits planned from district level to health facilities	65% 82/126 visits	100% 111/111 visits	66% 86/126	Included here are planned visits for province-to-district and district-to-primary health facility support supervision.
		6.2.7 (TB CARE/PEFAR) [People trained using TB CARE/PEPFAR funds] Description: Health workers at all levels trained in any area of TB control using TB CARE funds	Indicator Value: Number Level: National Source: TB CARE/PEPFAR project Numerator: Health workers at all levels trained in any area of TB control using TB CARE funds	518	100% (1612/1612)	100% 1,612/1,612	This includes all the training supported through PEPFAR and TB CARE on different subjects and for different health care workers. (593 males and 1019 females)
Monitoring, Evaluation & Surveillance							
7.1	Strengthened TB surveillance	7.1.1 (TB CARE) An electronic recording and reporting system for routine surveillance exists at national and/or sub-national levels	Indicator Value: Yes/No Level: National and TB CARE geographic areas Source: NTP and TB CARE project	No	Yes	No	Work in progress for the establishment of the system

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
	7.2 Improved capacity of NTPs to analyze and use quality data for the management of the TB program	7.2.1 (TB CARE) Data quality measured by NTP	Any aspect of data quality has been measured in the last year (internal consistency, timeliness, completeness, accuracy, etc.) at national, intermediate/regional or peripheral levels. If yes, list the dimensions being measured. Indicator Value: Yes/No Level: National Source: NTP	Yes	Yes	Yes	
		7.2.2 (TB CARE) NTP provides regular feedback from central to intermediate level NTP prepares and disseminates regular, written and comparative feedback from central to intermediate levels based on analysis of national surveillance and programmatic data. Indicator Value: Yes/No Level: National and TB CARE geographic areas Source: NTP and TB CARE Project	Yes	Yes	Yes	Yes	
	7.3 Improved capacity of NTPs to	7.3.1 (TB CARE) Description: TB CARE-	7.3 Improved capacity of NTPs to perform operations	0	5	2	

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y3	Result Y3	Comments
	perform operations research	supported OR studies completed in the last 12 months. Indicator Value: Number (of OR studies) Level: National or sub-national level Source: TB CARE project	research				

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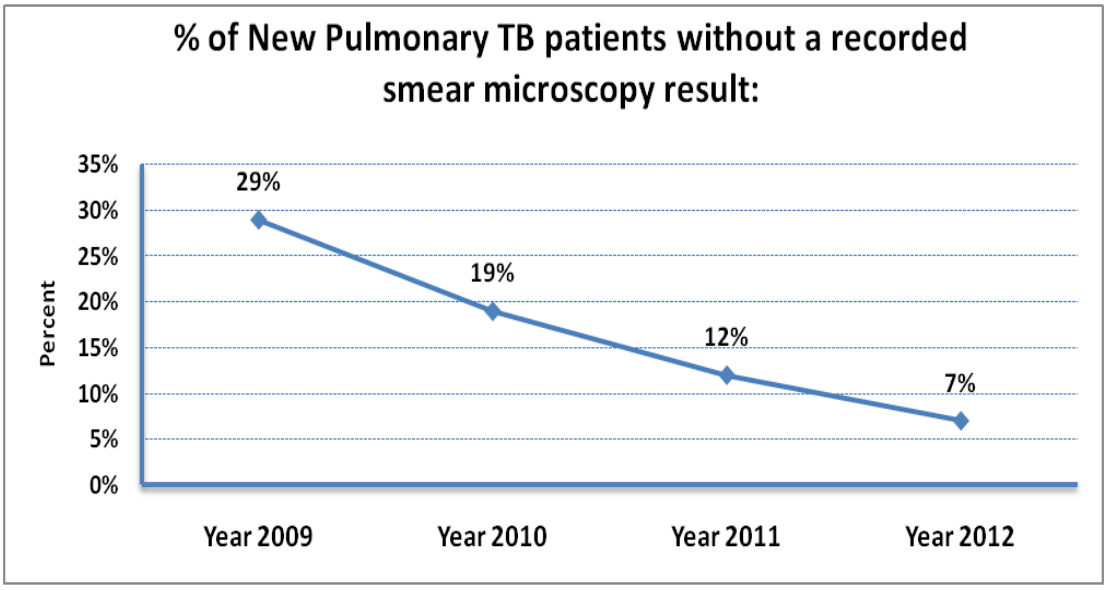
The key expected outcomes in this technical area were:

1. *Increased quality of TB services delivered among all care providers*
2. *Reduced patient and service delivery delays*.

Key Results

The main outcome indicator was: **pulmonary TB patients without a recorded smear microscopy result among adult patients.** The quality of TB diagnosis continued to improve during year 3 as illustrated in Figure I. A diagnosis of pulmonary TB, without a recorded smear microscopy result, was made in only 7% of adults and equaled the 7% target in the plan. This is despite the increased number of presumptive TB cases from 950 per 100,000 in 2011 to 1001/100,000 in 2012.

Figure 1: New pulmonary TB patients without a recorded smear microscopy result

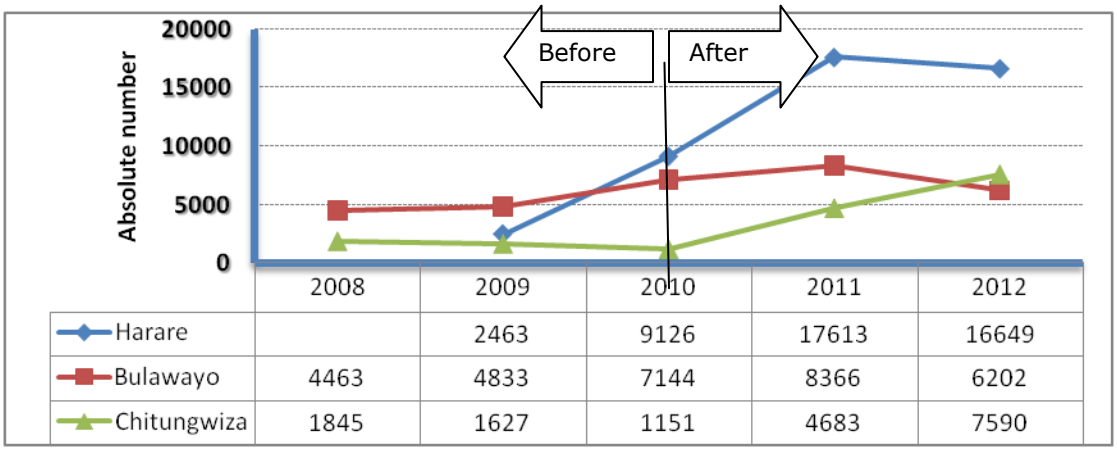


Other results

Sputum transport system

The system has contributed to the modest improvement in case finding of sputum positive TB, at a time when the total number of notifications is steadily declining. The turnaround time for results in urban areas was at less than 48 hours, and 1 week in rural areas where the system operates once per week. This is facilitating early initiating of TB treatment. Figures 2 and 3 illustrate the increase in the number of presumptive and confirmed cases respectively before and after the introduction of the sputum transport system. Communication with health workers and communities revealed that the system has helped strengthen confidence in the health system in the areas involved.

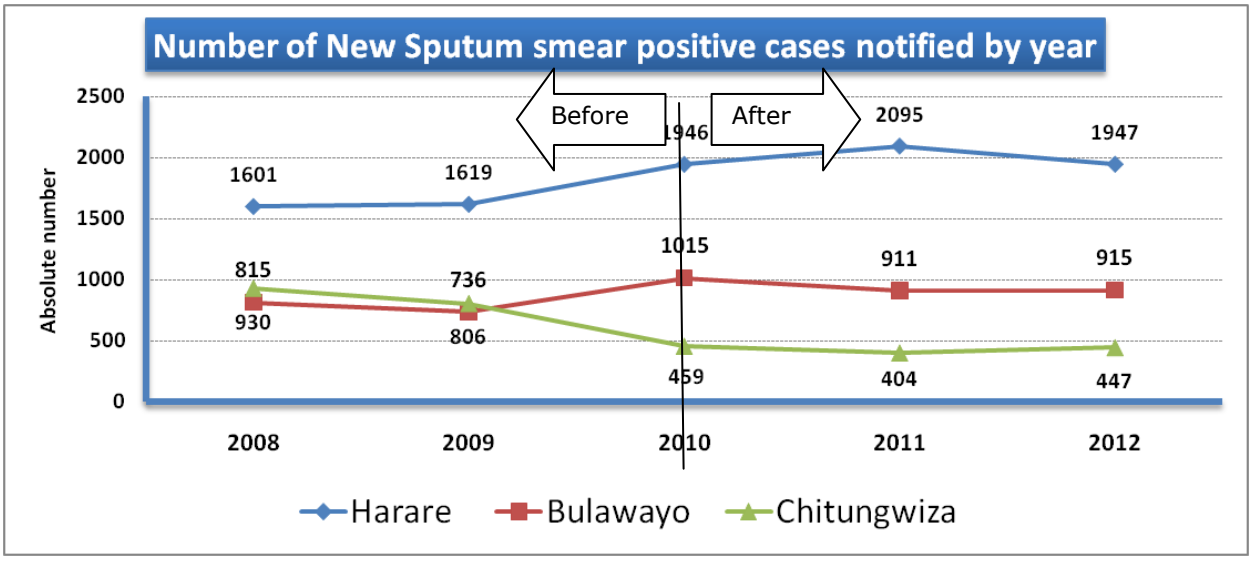
Figure 2: Sustained increased in the number of presumptive TB cases with smear examination before and after the introduction of the sputum transport system in 2010



	2008	2009	2010	2011	2012
Harare		2463	9126	17613	16649
Bulawayo	4463	4833	7144	8366	6202
Chitungwiza	1845	1627	1151	4683	7590

In urban areas the number of sputum specimens transported in the three cities of Bulawayo, Chitungwiza and Harare contributed to the diagnosis of 3309 confirmed TB patients diagnosed with confirmed TB during the year. A total of 3309 confirmed TB cases were diagnosed

Figure 3: Number of confirmed TB Cases diagnosed in the three cities (before and after the system)



In the rural areas the sputum transport system in the 5 districts (Zaka, Umzingwane, Makoni, Gokwe North and Umguza) has been operating for a year now. A total of 3,417 sputum samples (both presumptive and follow-up samples) were transported to the laboratories, resulting in the diagnosis of 170 confirmed TB patients. An initial sharp rise in the proportion of cases diagnosed from the samples was not sustained, prompting a planned follow up of the quality aspect of the system to be investigated in year 4.

Patient and service delivery delays on initiating TB treatment

A study conducted during the year revealed a provider delay of only 2 days and a patient delay of 28 days.

The Data collection methods and questionnaires (adapted) from WHO were administered by trained health workers at each selected health facility (district, mission, provincial urban and rural health facilities) - 48 health facilities in 4 provinces) The questionnaire included information on:

Socio-demographic characteristics; date of onset of any TB symptoms, date of first encounter with a health worker and number of visits to a health facility prior to starting treatment. Data were also abstracted from TB registers on sputum collection dates, name of referring health facility, TB treatment start date. Data was coded and single-entered electronically into Epidata version and analysed in Stata version 13.0. Taking of self medication for TB-related symptoms also contributed to delays in seeking treatment Patient delays were higher in those seeking treatment from rural primary health care centres who are a rural populace. TB CARE I is the process of distributing Information, Education and communication pamphlets to communities on signs and symptoms of TB as well as reasons for seeking early treatment. TB CARE I is also supporting the developments of community TB CARE guidelines and training materials.

LABORATORIES

The key expected outcome of the laboratories technical area was: **ensured optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans,** *and the main indicator was the number of rapid tests conducted using Gene Xpert MTB/RIF..*

Key Results

Below are the results of three Xpert MTB/rif instruments that were functional during the year. Seven of the planned instruments were only installed end of the financial year and did not contribute towards the results. The table below summarizes the outputs from the 3 Xpert instruments.

Gene Xpert tests conducted in TB CARE supported sites *(as of August 31th, 2013)*	
Number Presumptive **new TB & MDR**	**1329**
Patients diagnosed with GeneXpert in TB CARE supported sites	
Total successful **tests**	**1153**
Number of **MTB+** cases diagnosed using Xpert	**296**
Number of **Rif+** diagnosed	**31**
TB positivity rate	**26%**
Rif resistance rate	**11%**

The instruments have contributed to the sharp increase in drug resistant TB cases diagnosed nationally - from 40 in 2010 to 149 in 2012.

The high proportion of positive TB tests in general and for Rifampicin resistant TB is due to the selective nature of patients referred for the Xpert test. The 31 rifampicin resistant TB patients were presumed MDR TB. They were referred for early initiation of treatment, thus contributing towards prevention of the spread of DR-TB.

The target of 21, 500 tests however became impossible to achieve for the following reasons a) this target was set for 10 instruments that were expected to be in operation for 12 months; however, only three machines were in use b) the three units were operation for only ¾ of the year c) prolonged down time at one of the three sites d) expiry of cartridges.

Lessons learned

Most of the challenges above were related to limited familiarity with the new technology and included:

- Inadequate temperature control in the laboratory which may have contributed to error readings
- Prolonged down time following relatively minor malfunctioning
- Inefficient cartridge logistics
- Delay in use of appropriate recording and reporting tools

These issues will be addressed through specific technical assistance funding for the Xpert roll out.

Lessons learned

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INFECTION CONTROL

Scaled-up implementation of TB-IC strategies was the key expected outcome in this technical area. The indicator for movement towards the outcome was measured by: *the proportion of facilities implementing TB IC measures with PEPFAR support.*

Key Results

The number of facilities implementing TB IC measures with PEPFAR support increased from 13 to 23, in accordance with the year 3 plan target. In the process the following were also achieved:

Infection Control committees and plans: were formed in all the 23 ITHC sites and have helped in ensuring infection control is recognized as an integral part of integrated TB-HIV care. Of particular note are the following infection control measures in all 23 clinics:

- Each clinic infection control is based on tailor-made clinic plans
- Triaging and prioritization of coughing patients for early attention
- Health worker screening for tuberculosis is conducted every 6 months
- Improved patient flow ensured through proper signage at all 23 clinics

Renovations for infection control

Infection control has been improved by increasing ventilation through renovations and erection of well ventilated waiting shelters (Figure 3) for TB patients next to their consulting rooms, which has reduced overcrowding in the corridors and halls.

The quality of patient care has improved through increasing consultation and counseling rooms

Figure 4: The waiting area for Patients with TB at Mbizo 11 clinic in Kwekwe citv

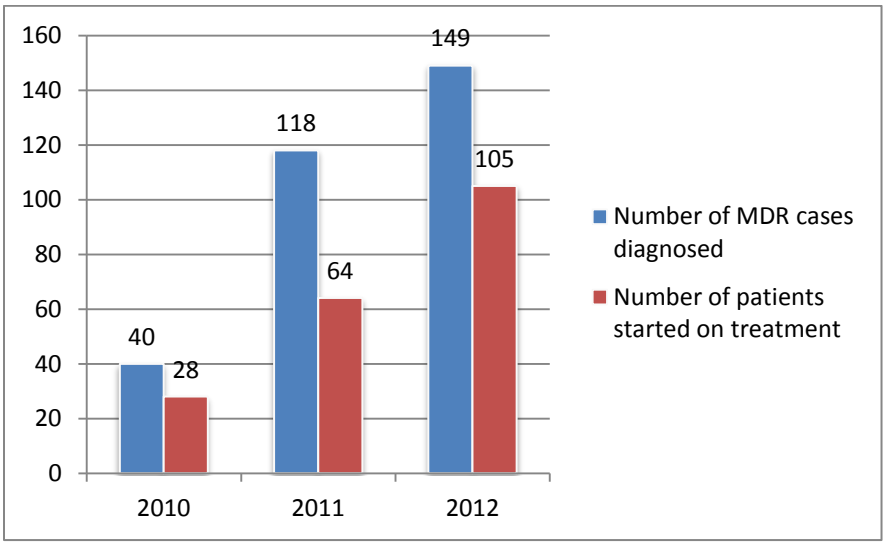
PROGRAMMATIC MANAGEMENT OF DRUG RESISTANCE TB

The expected outcome in this technical area was **improved treatment success of MDR TB** as measured by *the proportion of MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment.*

Results

Efforts in the implementation of PMDT, as described in the annex, have led to improvement in the care of patients with DR-TB. Indicators for MDR-TB diagnosis and treatment initiation have improve significantly as illustrated in Figure 5.

Figure 5: MDR cases detected and those started on treatment, 2010-2012



Out of 47 patients with MDR who had commenced MDR treatment at least 6 months previously, 30 (64%) were recorded to be still on treatment and had sputum culture conversion. The 71% target was not achieved, due to the following:

Decentralization: initially management of patients was done centrally by two regional teams. With the introduction of decentralization, getting evaluation outcomes in time from the over 60 districts presented a challenge of transportation of sputum samples and relaying of results, in particular since appropriate M&E tools had not yet been rolled out.

Steps will be taken in the coming year to address the above setbacks through the following:

- M&E tools and PMDT guidelines will be distributed to all facilities to strengthen recording and reporting.
- More training on PMDT including recording and reporting will be conducted.
- PMDT post training mentorship visits by provincial teams are planned
- TB CARE I will be working in APA 4 to help close the gap between patients being diagnosed and put on treatment through further training and support supervision

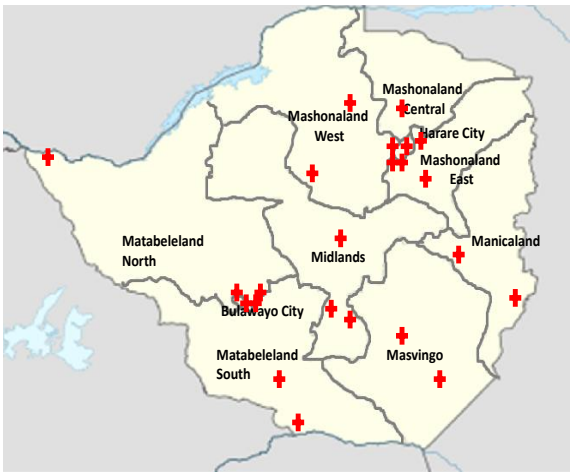
TB-HIV

This technical area focused on the PEPFAR funded integrated TB-HIV care (ITHC) component of year 3. The PEPFAR funded TB-HIV activities mainly focus on decentralization and integration of TB-HIV services in **primary health care clinics**. In the clinics, the patients are initiated on tuberculosis treatment and anti retroviral therapy (ART) and provided with follow up care by nurses. Currently ART is offered in only a limited number of clinics and this is largely responsible for the low ART uptake among TB patients living with HIV in the country. Support and supervision and training of staff is carried out in a bid to capacitate them to carry out the activities. At national level, general training, support and supervision for ART follow up and development of guidelines are also supported through TB CARE funding.

The main expected outcomes in the TB-HIV technical area were:

1. Strengthened prevention of TB-HIV co-infection
2. Improved diagnosis of TB-HIV co-infection
3. Improved treatment of TB-HIV co- infection

Figure 6: Geographic location of ITHC clinics



4. Key Results

TB/HIV programming was an integral part of all interventions at national level in all technical areas through trainings, performance reviews and support supervision among others. In specific PEPFAR support the number of target clinics increased from 13 to 23. Important progress continues to be made in the decentralization and integration of TB and HIV care at the 23 ITHC clinics as demonstrated by the following indicators and results for the technical area in year 3: Of note is that the TB-HIV data at the ITHC clinics is captured currently (with the quarterly notification summaries) every quarter while the data at national level is reported in retrospect (in the quarterly outcome summaries). The country is in the process of changing to collect the current TB-HIV data starting in January 2014.

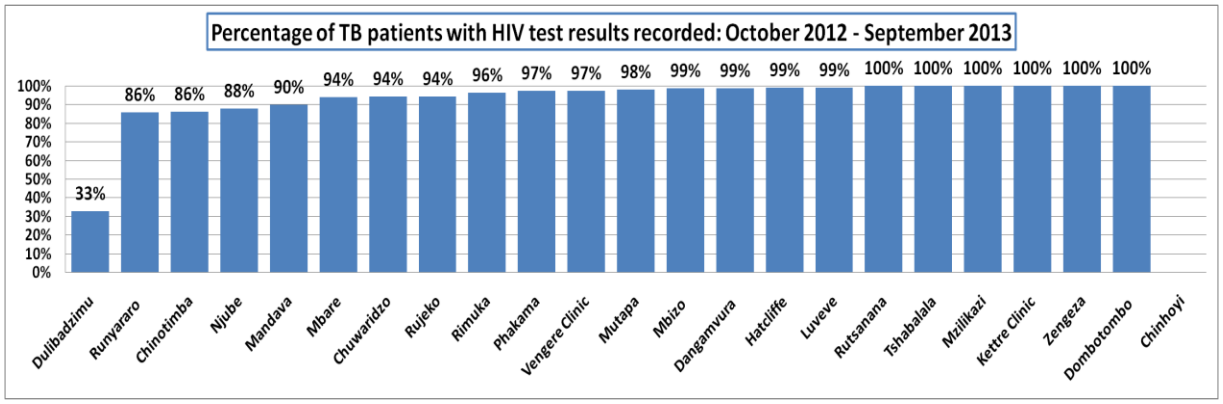
Indicators for TB-HIV – PEPFAR supported sites

- *HIV-positive patients seen at HIV settings who were screened for TB symptoms:* a total of 26,340 HIV-positive patients were seen in HIV care settings. As standard practice, all patients seen in HIV care settings were routinely screened for TB. The target of 60% was thus considered no longer applicable as virtually all patients were screened for TB at least once.

- *New HIV patients treated for latent TB infection (IPT)*: The project contributed to this indicator through the inclusion of 3 PEPFAR-supported sites in the country-wide but limited IPT implementation in 10 sites. Of the 12,523 eligible HIV patients seen at the 10 sites, 5,166 41%) were commenced on IPT from January to September 2013, against a planned target of 30%. Full rollout of IPT is planned for January 2014.

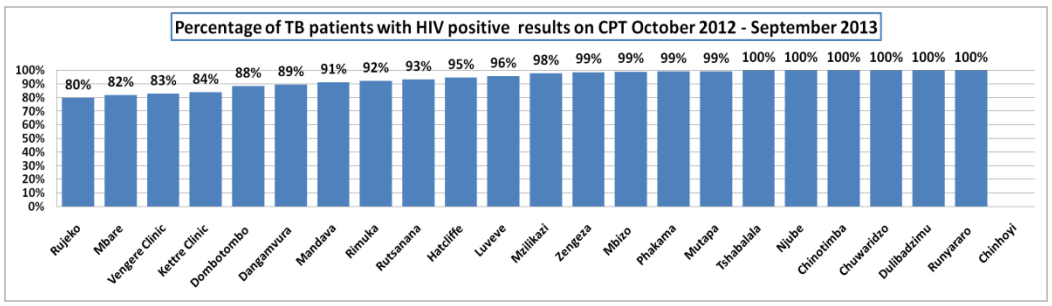
- *TB patients with a recorded HIV test*: of the 3096 TB patients registered during the year, 91% (2812)were tested for HIV and the result recorded. This was slightly below the planned target of 100%. Screening of TB patients for HIV is also now standard practice in TB care settings. The national achievement was 93 percent for the first two quarters of 2012. Although the average achievement was below the target, due to very low performance in a few clinics as shown in Figure 7. The reasons, which also apply to the CPT and ART results, are explained further below.

Figure 7: HIV testing among TB patients



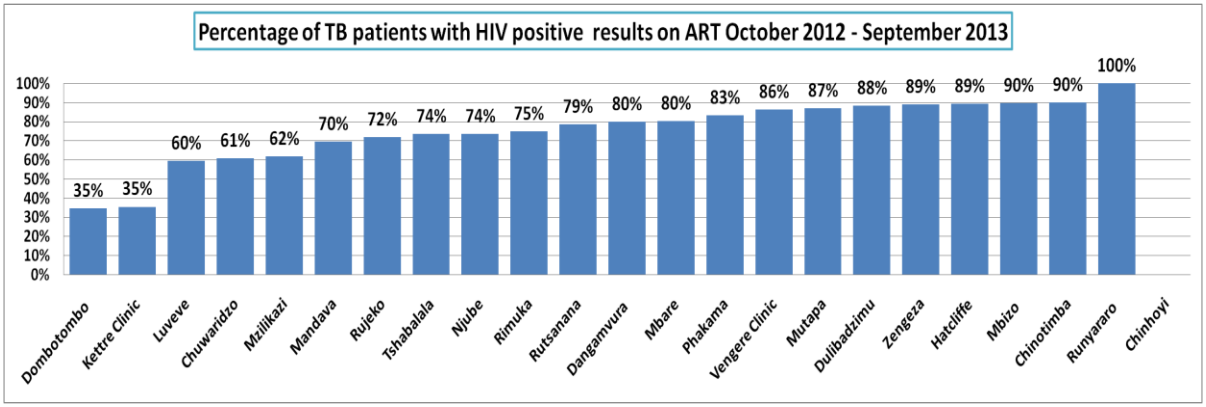
- *HIV-positive patients who were on CPT:* the result was 89%, below the target of 95%. The reasons are explained below. Figure 8 shows CPT results for the individual clinics.
- For the national level the result equaled the target.

Figure 8: CPT for HIV positive TB patients



- *HIV-positive TB patients who received ART*: 67% of patients were started on ART. Although this figure is low in terms of national guidelines, and the fact that the clinics concerned receive special support, it represents a steady increase in access to ART. It also exceeded the plan target of 60%, which took into account the challenges of setting up a new and relatively complex service. Figure 8 shows results for the individual clinics.

Figure 9: ART for HIV positive TB patients



There were two main reasons identified for missing some targets: a) some clinics experienced problems in the recording and reporting of patients diagnosed with TB in one month and received the next care (HIV testing, CPT, ART) in the next month, resulting in some patients being missed out altogether. This was realized after closure of the year b) some clinics experienced technical capacity problems in initiating both TB and HIV treatment together, especially if both are for the first time. This required more intensive support supervision in the first months than others, which was not always available from their respective districts. This problem was largely resolved by the third quarter. The experience gained and lessons learned will assist in the ultimate roll out of decentralized integrated TB and ART initiation and follow up to all primary health care clinics.

HEALTH SYSTEMS STRENGTHENING

The key expected outcome in the health systems strengthening technical area was: **"TB control components (drug supply and management, laboratories, community care, HRD and M&E) form an integral part of national plans, strategies and service delivery."**

Results

The results, with respect to the key outcome indicators are summarized below:

- *TB CARE I supported supervisory visits conducted*: high investment was made towards support supervision as it was considered key in ensuring translation of knowledge gained in group training into practice and ensuring adherence to national guidelines and quality. Of the 15 planned province-to-district visits, 9 (66%) were conducted; and of 111 planned district-to-primary health care centre visits, 74 (66%) were conducted. The inability to achieve the target was due mainly due to delayed accounting for funds advanced for travel and subsistence for support supervision. Further , financial disbursements could only be done after the previous disbursements were appropriately cleared. Balancing between the need to advance further funds to ensure implementation on the one hand, and ensuring full accounting for funds advanced on the other, continued to be a challenge to be tackled further in the coming year.

- *Health workers at all levels trained in any area of TB control using TB CARE funds:* all 52 planned training workshops were conducted and 1612 health workers were trained (593 male and 1019 female) across 5 technical areas as follows:

Technical area	**# trained**
Infection control	600 (including 569 community health workers)
PMDT	118
TB-HIV	245
Health systems strengthening	625
Monitoring and Evaluation	24
Total	**1612**

The training contributed to the following at district/implementation level:

- Improved knowledge of TB control program management and clinical management by health workers, including tutors at health training institutions. This will help equip newly qualified nurses with skills to management TB and TB-HIV at their areas of work prior to in-service training. This is expected, in the long run, to reduce the length of in-service training.
- The improvement in some of the indicators outlined in this report is to a large extent attributed to the extensive training that has taken place with the support of TB CARE I.

MONITORING & EVALUATION, OPERATIONS RESEARCH AND SURVEILLANCE

The key expected outcomes in the health systems technical areas were:

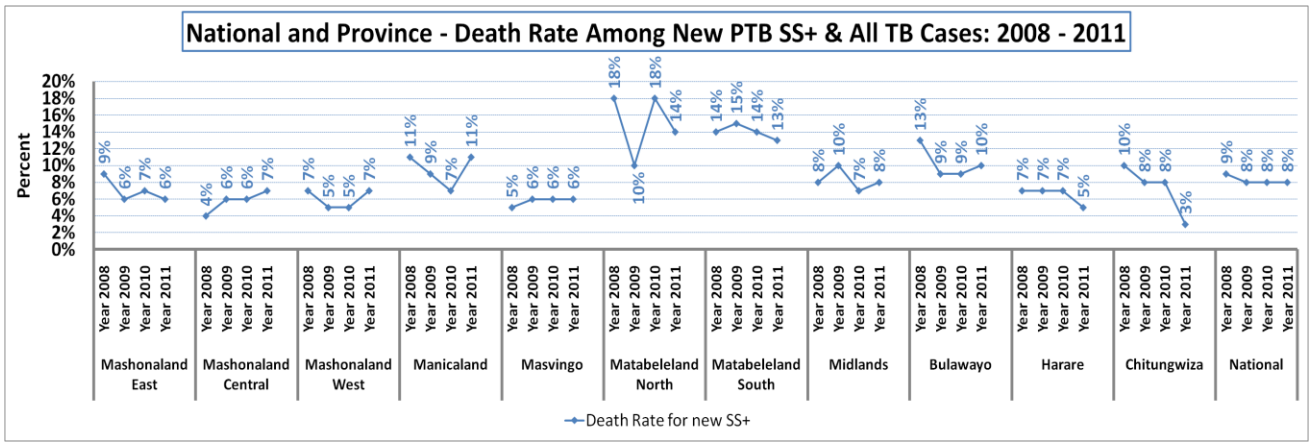
1. Strengthened TB surveillance
2. Improved capacity of NTPs to analyze and use quality data for the management of the TB program and
3. Improved capacity of NTPs to perform operations research"

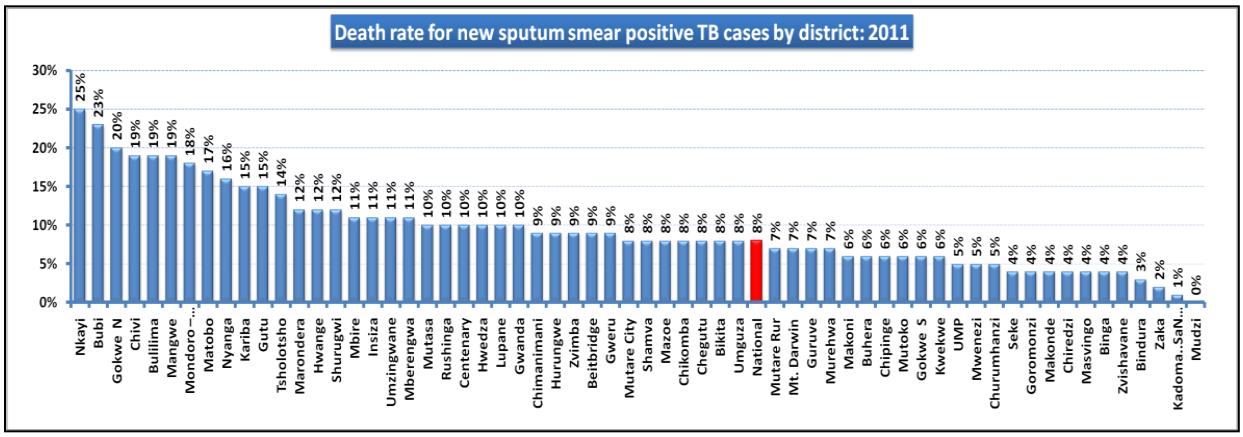
Results

Below are the implementation results, based on the outcome indicators for this technical area:,

- *Existence of an electronic recording and reporting system for routine surveillance:* although the target was not achieved, process of introducing an electronic recording and reporting system is well under way; a pilot in a limited area in expected to commence early in year 4 in 7 rural districts and one city. Additional funding for the national rollout nationally is expected from the Global Fund**.** The lead partner is WHO; the Union has participated in the development of the road map and stakeholder sensitization.
- *Data quality measured by NTP*: with TB CARE I funding, on sight data verification exercises were conducted to 4 districts as planned. No major quality issues were identified.

- *NTP provides regular feedback from central to intermediate level; NTP prepares and disseminates regular, written and comparative feedback from central to sub-national levels based on analysis of national surveillance and programmatic data:* TB CARE I funded and provided technical support for regular comparative provincial and district level data analyses by NTP, and dissemination of the results to sub-national levels. Below are some some examples:





The routine data analysis exercise has contributed towards an improved TB program through the following ways:

- Early identification of inaccurate and or incomplete data through desk analysis and subsequent follow up for clarifications and corrections at all levels.
- The feedback reports have stimulated interest and competitiveness among provincial and district managers in the TB program. Comparison of data across districts has encouraged provinces and districts to institute measures to address the sometimes glaring gaps that were exposed by the quarterly data these analysis reports.

- *TB CARE-supported Operations Research (OR) studies completed in the last 12 months:* Two studies were completed namely:
  a) Does the type of treatment supporter infl uence tuberculosis treatment outcomes in Zimbabwe? N. Mlilo,1 C. Sandy,2 A. D. Harries,3,4 A. M. V. Kumar,5 N. Masuka,6 B. Nyathi,1 M. Edginton,7 P. Isaakidis,8 M. Manzi,8 N. Siziba2

- The study sought to further clarify the evidence for use of health facility, community and family based DOT. The conclusion was that **"**there were no differences in TB treatment outcomes between the three DOT groups, except a higher frequency of no reported outcomes in those receiving family-based DOT. Family members should be trained to use a suitable DOT support package".

b) TB treatment delays and associated factors within the Zimbabwe National Tuberculosis programme: Institutions: Kudakwashe C Takarinda 1§, Anthony D Harries 2, 3, Barnet Nyathi 4, Mkhokheli Ngwenya 1 Tsitsi Mutasa-Apollo 1, Charles Sandy 1.
   - The aim of the study was to determine the length of, and factors in, provider and patient delays in initiation of TB treatment. Main conclusions were: a) there was a median of 28 days for patient delays and 2 days for health system delays; b) starting TB treatment at district / mission hospitals vs rural primary healthcare facilities was associated with shorter patient delays c) taking self-medication increased patient delays

Challenges and next steps in strengthening operations research

Operations research progress was very slow. The focus of support was on provinces to conduct research relevant to their locality. However despite training, capacity to develop research proposals remained a challenge. Working with one of the collaborating partners, the program adopted an individual mentorship approach which proved to be more productive because there is one-on-one mentorship and the individual researcher is supported through all stages of the research until the results are disseminated and used.